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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/396,238	09/15/1999	YUSUKE NAKAZAWA	JG-NG-4893	7148
23373	7590	05/25/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			FUNK, STEPHEN R	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 05/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/396,238	<b>Applicant(s)</b> NAKAZAWA ET AL.	
	<b>Examiner</b> Stephen R Funk	<b>Art Unit</b> 2854	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, and 5 - 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (JP 10-204,355) in view of Jones et al. (US 5,936,008), Ishii et al. (JP 10-203,039), Chocholaty et al. (US 4,130,126), and Love, III (US 4,718,340).

Kato et al. teach a method of lithographic printing (paragraphs 83 and 101) comprising forming an image based on signals of image data directly on a printing plate precursor (paragraphs 8, 13, and 66, figure 1), wherein the step of forming the image is carried out by an ink jet recording method (paragraphs 8 and 63 - 65, figure 1) in which oil based ink is ejected utilizing an electrostatic field (paragraphs 5 and 63), further comprising using a device for fixing the image on the printing plate precursor by heating (paragraphs 33 and 99), wherein the printing plate has an image receiving layer (paragraphs 8, 36, and 66 - 67), and the oil based ink comprises electroscopic particles (claim 2 and paragraphs 14, 59, and 60). Kato et al. do not teach a heat roller, controlling the concentration of the ink, forming the image when the plate precursor is mounted on a plate cylinder and wherein the image receiving layer is hydrophilic at the time of imaging. Note that Kato et al. teach imparting the hydrophilicity after imaging in paragraphs 82 and 101.

Jones et al. teach the conventionality of heat roll heating an ink jetted image. See column 5 lines 9 - 21 of Jones et al.

Chocholaty et al. teach controlling the concentration of the ink by feeding a concentrated ink and a diluent. See column 1 lines 17 - 26 and column 5 lines 1 - 3 of Chocholaty et al., for example.

Ishii et al. teach the conventionality of either providing a hydrophilic layer or, if necessary, desensitizing the image receiving layer to impart greater hydrophilicity. See paragraph 25 of Ishii et al. and pages 26 - 27 in applicant's substitute specification.

Love teaches the desirability of imaging a printing plate in press. See columns 2 and 3, the paragraph bridging columns 11 and 12, and column 21 lines 13 - 37 of Love, for example.

It would have been obvious to one of ordinary skill in the art to provide the method of Kato et al. with a heat roller in view of Jones et al. teaching heat rollers as a conventional fixing device, controlling the ink concentration in view of Chocholaty et al. to provide proper printing contract, a hydrophilic image receiving layer in view of Ishii et al. to forego the desensitizing step and imaging the plate in press in view of Love to achieve the many benefits of directly imaging the plate in press. With respect to claim 2 Kato et al. teaches the ink as recited (see claim 1 of Kato et al., for example). With respect to claim 7 it would have been obvious to one of ordinary skill in the art to provide the method of Kato et al. with a full line head as disclosed by Love to achieve faster imaging of the plate.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. in view of Jones et al., Chocholaty et al., Ishii et al. and Love as applied to claims 1, 2, and 5 - 7 above, and further in view of Masaaki (JP 58-147,373). Masaaki teaches the conventionality of a means for removing dust from a recording medium before imaging. It would have been obvious to one of ordinary skill in the art to provide the method of Kato et al., as modified by Jones et al.,

Chocholaty et al., Ishii et al. and Love, with the step of removing dust before imaging in view of Masaaki so as to prevent dust from interfering with the deposition of ink onto the plate.

Claims 8 - 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. in view of Jones et al., Chocholaty et al., Ishii et al. and Love as applied to claims 1, 2, and 5 - 7 above, and further in view of Arway et al. (US 4,555,712). Arway et al. teach the conventionality of a means (22) for supplying ink, means (26) for recovering ink, means (40) for controlling the temperature of ink, and means (44) for controlling a concentration of ink for an ink jet print head. See Figure 1 of Arway et al., for example. Arway et al. does not teach means for stirring ink inside the ink tank but such is widely conventional in the art. It would have been obvious to one of ordinary skill in the art to provide the method of Kato et al., as modified by Jones et al., Chocholaty et al., Ishii et al. and Love, with various means for controlling the ink inside the tank in view of Arway et al. so as to provide ink to the head in an optimum condition.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. in view of Jones et al., Chocholaty et al., Ishii et al. and Love as applied to claims 1, 2, and 5 - 7 above, and further in view of Ikkatai (US 5,363,132). Ikkatai teaches the desirability of means for moving the head near or away from a recording medium. See columns 1 and 2 of Ikkatai, for example. It would have been obvious to one of ordinary skill in the art to provide the method of Kato et al., as modified by Jones et al., Chocholaty et al., Ishii et al. and Love, with the step of moving the head near or away in view of Ikkatai so as to protect the head from contaminants when not imaging.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. in view of Jones et al., Chocholaty et al., Ishii et al. and Love as applied to claims 1, 2, and 5 - 7

above, and further in view of Gasparrini (US 5,322,015). Gasparrini teaches the desirability of removing dust during printing. See the paragraph bridging columns 5 and 6 of Gasparrini, for example. It would have been obvious to one of ordinary skill in the art to provide the method of Kato et al., as modified by Jones et al., Chocholaty et al., Ishii et al. and Love, with the step of removing dust during printing in view of Gasparrini so as to reduce contamination of the printing cylinders.

Claims 12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. in view of Jones et al., Chocholaty et al., Ishii et al., and Love as applied to claims 1, 2, and 5 - 7 above, and further in view of Miura et al. (US 5,988,782). Miura et al. teach the conventionality of stirring the ink within a tank and cleaning the ink jet head. See the Abstract and column 17 line 1 of Miura et al., for example. Note also paragraph [0107] of Kato et al. It would have been obvious to one of ordinary skill in the art to provide the method of Kato et al., as modified by Jones et al., Chocholaty et al., Ishii et al. and Love, with a means for stirring the ink and means for cleaning the head in view of Miura et al. so as to provide a consistent ink composition to the head and remove contaminants from the head.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. in view of Jones et al., Chocholaty et al., Ishii et al., and Love as applied to claims 1, 2, and 5 - 7 above, and further in view of Mayrhofer et al. (US 4,846,065). Kato et al., as modified by Jones et al., Chocholaty et al., Ishii et al., and Love, do not teach coating the plate cylinder with a heat insulator. Mayrhofer et al. teach the desirability of coating a plate cylinder with a heat insulator (12) to prevent dissipation of heat into the plate cylinder. See the Abstract of Mayrhofer et al., for example. It would have been obvious to one of ordinary skill in the art to provide the method

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of Kato et al., as modified by Jones et al., Chocholaty et al., Ishii et al., and Love, with a plate cylinder coated with a heat insulator in view of Mayrhofer et al. to prevent the plate cylinder from readily dissipating the heat used to fix the ink image on the printing plate.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See column 16 lines 54 - 55 of Tsubuko et al. ('048) and column 6 lines 12 - 19 of Yamamoto et al. ('815).

Applicant's arguments filed April 21, 2004 have been fully considered but they are not persuasive. Applicant's argument that there is no motivation to combine the references is not persuasive since Jones et al. teach that heat roll fixing ink jet images is known and Love teaches the desirability of imaging printing plates in press. The additional reference to Chocholaty et al. further teaches controlling the ink concentration in the recited manner so as to provide the proper printing contrast. Applicant has not sufficiently refuted the *prima facie* case of obviousness of providing an ink jet printing method with each of the known and desirable steps recited in claim 1.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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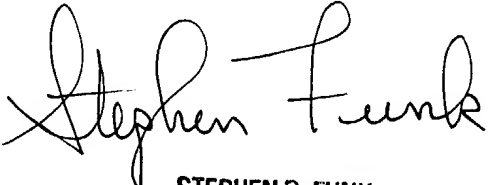
CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen R. Funk whose telephone number is (571) 272-2164.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Hirshfeld, can be reached at (571) 272-2168.

The fax phone number for ALL official papers is (703) 872-9306. Upon consulting with the examiner *unofficial* papers only may be faxed directly to the examiner at (571) 273-2164.

SRF  
May 17, 2004

A handwritten signature in black ink that reads "Stephen Funk". The signature is written in a cursive, flowing style.

**STEPHEN R. FUNK  
PRIMARY EXAMINER**